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Microfluidic chip ionization source coupling with mass spectrometry

Ionization source is a vital component of the mass spectrometer. In recent years, with the development of the mass spectrometer miniaturization and the microfluidic chip integration technologies, increasing research efforts have been devoted to the coupling of microfluidic chip ionization source to mass spectrometry. Facing requirement of portable MS used for on-site rapid detection, a microfluidic chip ionization source is developed. Multi-layer soft photolithography technology is chosen as the fabrication craft for the microfluidic chip template, and three novel microfluidic chip ionization sources were proposed, such as a microfluidic chip-based multi-channel ionization (MCMCI) was developed to extend the application of microfluidic chip ionization to MS. This MCMCI implemented extraction of untreated compounds in complex matrices without sample pretreatments and dual sprays with high DC voltages simultaneously.

Biography

Xiaohao Wang completed his Bachelor's and Doctor degrees at Tsinghua University in 1994 and 1999, respectively. From 1998, he worked at Tsinghua University as a Faculty Member, and was promoted to Full Professor in 2000. From 2007 to 2008, he was at Technical University of Berlin as a Visiting Scholar. He serves as the Deputy Dean of Graduate School at Shenzhen, Tsinghua University, now. His research interests cover MEMS based sensors, actuators, ionizing sources and portable analytical instrument. He has published over 200 technical papers and holds tens of patents.

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